

AMENDMENTS TO THE CLAIMS:

Please cancel claims 1-123 without prejudice or disclaimer. Please add the claims set forth below.

1 - 123 (Canceled).

124. (New) A process for preparing an orthopaedic implant prosthesis bearing having improved mechanical properties and increased wear resistance comprising the steps of:

providing a polyethylene preform from which the bearings are to be fabricated;
heating the preform to a temperature greater than its melting temperature and less than its decomposition temperature for a time sufficient to increase its percent elongation to break properties;

and then, subsequently irradiating the perform.

125. (New) The process of claim 124 wherein the heating step is performed at temperatures from about 280°C to about 355°C.

126. (New) The process of claim 124 wherein the preform is irradiated with gamma radiation at a dose of about 0.5 to about 10 Mrad.

127. (New) A process for preparing an orthopaedic implant prosthesis bearing having improved mechanical properties and increased wear resistance comprising the steps of:

providing a polyethylene preform from which the bearings are to be fabricated;
Irradiating the preform; and

heating the preform to a temperature greater than its melting temperature and less than its decomposition temperature for a time sufficient to increase its percent elongation to break properties.